

# Purchase Order Receipt Listing

Tuesday, August 01, 2017 2:41:39 PM

All amounts are calculated in domestic currency.

All Vendors PO ID PO36986 Receipt Dates from 8/1/2017 to 8/1/2017 All Line Item Types  
All Item ID/GL/WOs All Rec. Employees All Currencies  
Grouped by Vendor ID

Purchase Order ID/ Curr Type	Line Nbr/ Insp	Project ID	Reference/ Description/ Cert Std	PO U/M / Stock U/M	Required Date Required Qty	Recv Date/ Recv Emp	Recv Qty (PO U/M)	Cost Per Unit/ Recv Value	Inspected Qty/ Rejected Qty (PO U/M)	MRB Qty/ MRB Reject Qty	Book Amt
Vendor ID \ Vendor Name VU-MET002 A.M. Castle & Co. (Canada) Inc.- C/O 910720											
PO36986	1		D6101-007P	Each	7/28/2017	8/1/2017	20.0000		0.0000	0	\$0.00
USD	No		7075-T7351	Each	20.0000	PLOU01			0.0000	0	
			8.25X7.75X2.5								
			m138202/164013								
	5		M7075T6S1.250X10. f	DAS 5	7/28/2017	8/1/2017	12.0000		0.0000	0	\$0.00
			1.338								
	No		7075-T6S Sheet	f	12.0000	PLOU01			0.0000	0	
			1.250" THICK x								
			10.000" WIDE								
			m138202/164013								
	6		M7075T6S1.250X12. f	DAS 5	7/28/2017	8/1/2017	12.0000		0.0000	0	\$0.00
			1.338								
	No		7075-T6S Sheet	f	12.0000	PLOU01			0.0000	0	
			1.250" THICK x								
			12.000" WIDE								
			m138202/164013								
	10		M7075T6S3.000X4.0 f	DAS 5	7/28/2017	8/1/2017	12.0000		0.0000	0	\$0.00
			00								
	No		7075-T6S Sheet	f	12.0000	PLOU01			0.0000	0	
			3.000" thick x 4.000"								
			wide								
			m138202/164013								
Total Received Quantity:											56.0000
Total Qty to Inspect (PO U/M):											0.0000
Total Reject Quantity:											0.0000
Total Receipt Value:											\$0.00
Total Balance Due Quantity:											0.0000

m7075+6 B3.000X4.000 CD AUG 15 2017

Acceptable as m7075+6Z 4/17/8 DAS 12 9-89



Castle Metals®

A. M. Castle & Co.

PACKING SLIP/  
CERTIFICATE OF CONFORMANCE

Page 1 of 1


Shipment No:3344442

<b>Ship From:</b> A. M. CASTLE & CO. 2150 ARGENTIA ROAD MISSISSAUGA, ON L5N 2K7 CAN		<b>Sold To:</b> DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA	<b>Ship To:</b> DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CAN	<b>Deliver To:</b> DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA
<b>Date Shipped</b> 31-JUL-17	<b>F.O.B.</b> ORIGIN	<b>Freight Terms</b> Prepaid	<b>Carrier</b> LOCAL_FLEET	<b>BOL No</b> 3344442-4

<b>Shipment Details</b>		<b>Final Destination Branch - TOR</b>
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<b>Order No</b> 4823222	<b>Line No</b> 1	<b>Item No</b> 752114.MO	<b>Description</b> 1.2500.PL.7075.T651.ALUMINUM.USI.48.5000.144.5000 CUT LENGTH TO 12 IN ( ) X 144.5 IN ( + .1250/- .0000 IN ) - ALUMINUM PLATE SAW SPECIFICATIONS: AMS-QQ-A-250/12
<b>Purchase Order No</b> 36986	<b>Part Number</b>	<b>Ordered Qty</b> 1.00 PCS	<b>Invoice Qty</b> 1.00 PCS

<b>Details</b> ALL PAPERWORK MUST FOLLOW ORDER / CUSTOMER MUST RECEIVE AT TIME OF DELIVERY ALL MATERIAL MUST HAVE IDENTIFYING MARKINGS EX:HEAT #'S Email P/s and certs to: clavoie@dartaero.com END USER: DART AEROSPACE END USE: COMMERCIAL AIRCRAFT PARTS			
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<b>Delivery No.</b> 121204882	<b>Mill</b>	<b>Heat Number</b>  93823411	<b>Mech Id</b> DAS 5 9-89	<b>PCS</b> 1	<b>Width (IN)</b>	<b>Length (IN)</b>	<b>Shipped Qty(LBS)</b> 224.3464
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We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications forming a part of the description. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment. Material cut to the correct size, or material cut by the customer cannot be returned for credit.

Reviewed by Authorized Castle Metals Representative:

SHIPPED JUL 31 2017

Date:

Name: M. Rander



Date Printed: 31-JUL-2017 02:44:09 PM

**Castle Metals®**

A. M. Castle &amp; Co.

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CERTIFICATE OF CONFORMANCE

Page 1 of 1

Shipment No:3344442

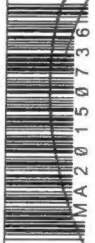
<b>Ship From:</b> A. M. CASTLE & CO. 2150 ARGENTIA ROAD MISSISSAUGA, ON L5N 2K7 CAN		<b>Sold To:</b> DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA	<b>Ship To:</b> DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA	<b>Deliver To:</b> DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA
<b>Date Shipped</b> 31-JUL-17	<b>F.O.B.</b> ORIGIN	<b>Freight Terms</b> Prepaid	<b>Carrier</b> LOCAL_FLEET	<b>BOL No</b> 3344442-4

<b>Shipment Details</b>		<b>Final Destination Branch - TOR</b>
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<b>Order No</b> 4823222	<b>Line No</b> 6	<b>Item No</b> 21391	<b>Description</b> 3.0000.4.0000.RECT.7075.T651.ALUMINUM.CF.144.0000 SPECIFICATIONS: AMS-QQ-A-225/9
<b>Purchase Order No</b> 36986	<b>Part Number</b>	<b>Ordered Qty</b> 12.00 FT	<b>Invoice Qty</b> 12.0000 FT

**Details**  
ALL PAPERWORK MUST FOLLOW ORDER / CUSTOMER MUST RECEIVE AT TIME OF DELIVERY  
ALL MATERIAL MUST HAVE IDENTIFYING MARKINGS EX:HEAT #'S  
Email P/s and certs to: clavoie@dartaero.com  
END USER: DART AEROSPACE  
END USE: COMMERCIAL AIRCRAFT PARTS

S27-8-1

<b>Delivery No.</b> 121190997	<b>Mill</b> ARCONIC INC	<b>Heat Number</b>  DAS 5 9-89	<b>Mech Id</b> 1	<b>PCS</b> 1	<b>Width (IN)</b>	<b>Length (IN)</b> 144.0000	<b>Shipped Qty(LBS)</b> 174.2520
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We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications forming a part of the description. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment. Material cut to the correct size, or material cut by the customer cannot be returned for credit.

Reviewed by Authorized Castle Metals Representative:

SHIPPED JUL 31 2017

Date:

Name: M. Rando

1500-2



Date Printed: 31-JUL-2017 02:44:09 PM

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A. M. Castle &amp; Co.

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CERTIFICATE OF CONFORMANCE

Page 1 of 2


Shipment No:3344442

<b>Ship From:</b> A. M. CASTLE & CO. 2150 ARGENTIA ROAD MISSISSAUGA, ON L5N 2K7 CAN		<b>Sold To:</b> DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA	<b>Ship To:</b> DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CAN	<b>Deliver To:</b> DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA
<b>Date Shipped</b> 31-JUL-17	<b>F.O.B.</b> ORIGIN	<b>Freight Terms</b> Prepaid	<b>Carrier</b> LOCAL_FLEET	<b>BOL No</b> 3344442-4

<b>Shipment Details</b>	<b>Final Destination Branch - TOR</b>
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<b>Order No</b> 4823222	<b>Line No</b> 7	<b>Item No</b> 752241.MO	<b>Description</b> 2.5000.PL.7075.T7351.ALUMINUM.USI.48.5000.144.5000 CUT 2SIDED TO 8.25 IN ( + .0310/- .0000 IN (GRAIN TO RUN ALONG 7.75")) X 7.75 IN ( + .0310/- .0000 IN (GRAIN TO RUN ALONG 7.75")) ALUMINUM PLATE SAW SPECIFICATIONS: AMS-QQ-A-250/12
<b>Purchase Order No</b> 36986	<b>Part Number</b> YOUR ITEM NUMBER: D6101-007	<b>Ordered Qty</b> 20.00 PCS	<b>Invoice Qty</b> 20.00 PCS

<b>Details</b>	ALL PAPERWORK MUST FOLLOW ORDER / CUSTOMER MUST RECEIVE AT TIME OF DELIVERY ALL MATERIAL MUST HAVE IDENTIFYING MARKINGS EX:HEAT #'S Email P/s and certs to: clavoie@artaero.com END USER: DART AEROSPACE END USE: COMMERCIAL AIRCRAFT PARTS		
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<b>Delivery No.</b> 121190924	<b>Mill</b>	<b>Heat Number</b>  938915311	<b>Mech Id</b> 20	<b>PCS</b> 20	<b>Width (IN)</b>	<b>Length (IN)</b>	<b>Shipped Qty(LBS)</b> 330.6337
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We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications forming a part of the description. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment. Material cut to the correct size, or material cut by the customer cannot be returned for credit.

Date Printed: 31-JUL-2017 02:44:09 PM



**Castle Metals®**

A. M. Castle & Co.

PACKING SLIP/  
CERTIFICATE OF CONFORMANCE

Page 2 of 2

Reviewed by Authorized Castle Metals Representative:	Date:	Name:
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SHIPPED JUL 31 2017

*M. Rander*

*807-81*

**INTERORG TRANSFER  
PACKING SLIP/  
CERTIFICATE OF CONFORMANCE**

Page 1 of 2

ABF 086 595 354

Shipment No: 3338276

<b>Ship From:</b> A. M. CASTLE & CO. 4175 ROYAL DRIVE SUITE 600 KENNESAW, GA 30144 USA		<b>Sold To:</b> DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA		<b>Ship To:</b> A. M. CASTLE & CO. 2150 ARGENTIA ROAD MISSISSAUGA, ON L5N 2K7 CAN		<b>Deliver To:</b> DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA	
<b>Date Shipped</b> 24-JUL-17	<b>F.O.B.</b> ORIGIN	<b>Freight Terms</b> Prepaid	<b>Carrier</b> ABF	<b>BOL No</b> 3338276-2			

<b>Shipment Details</b>		<b>Final Destination Branch - TOR</b>
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<b>Order No</b> 4823222	<b>Line No</b> 8	<b>Item No</b> 752114.MO	<b>Description</b> 1.2500.PL.7075.T651.ALUMINUM.USI.48.5000.144.5000 CUT LENGTH TO 10 IN ( + .1250/- .0000 IN) X 144.5 IN ( ) ALUMINUM PLATE SAW SPECIFICATIONS: AMS-QQ-A-250/12
<b>Purchase Order No</b> 36986	<b>Part Number</b>	<b>Ordered Qty</b> 1.00 PCS	<b>Invoice Qty</b> 1.00 PCS

**Details**  
ALL PAPERWORK MUST FOLLOW ORDER / CUSTOMER MUST RECEIVE AT TIME OF DELIVERY  
ALL MATERIAL MUST HAVE IDENTIFYING MARKINGS EX:HEAT #S  
Email P/s and certs to: clavoie@dartaero.com  
END USER: DART AEROSPACE  
END USE: COMMERCIAL AIRCRAFT PARTS

8877-8-1

<b>Delivery No.</b> 121204882	<b>Mill</b>	<b>Heat Number</b> DAS 5 9-89	<b>Mech Id</b> PCS 1	<b>Width (IN)</b>	<b>Length (IN)</b>	<b>Shipped Qty(LBS)</b> 186.9553
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These items are controlled by the U.S. Government and authorized for export only to the country of ultimate destination for use by the ultimate consignee or end-user(s) herein identified. They may not be resold, transferred, or otherwise disposed of, to any other country or to any person other than the authorized ultimate consignee or end-user(s), either in their original form or after being incorporated into other items, without first obtaining approval from the U.S. Government or as otherwise authorized by U.S. law and regulations.

These items are controlled by the U.S. Government and authorized for export only to the country of ultimate destination for use by the ultimate consignee or end-user(s) herein identified. They may not be resold, transferred, or otherwise disposed of, to any other country or to any person other than the authorized ultimate consignee or end-user(s), either in their original form or after being incorporated into other items, without first obtaining approval from the U.S. Government or as otherwise authorized by U.S. law and regulations.  
Date Printed: 24-JUL-2017 01:43:52 PM

INTERORG TRANSFER  
PACKING SLIP/  
CERTIFICATE OF CONFORMANCE

Page 2 of 2

We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications forming a part of the description. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A.M. Casile & Co. within 60 days of the shipment. Material cut to the correct size, or material cut by the customer cannot be returned for credit.	
Reviewed by Authorized Casile Metals Representative:	
7/24/17	Date: 5/21/18
Name: Smith	



Qp 17-8-21



B3-8-2

Constellium


**CERTIFIED TEST REPORT**  
 Constellium Rolled Products  
 Ravenswood, LLC

SHIP TO


A M CASTLE &amp; COMPANY

 4175 ROYAL DRIVE  
 KENNESAW GA  
 30144  
 US

SOLD TO

A M CASTLE

 1420 KENSINGTON ROAD, SUITE 220  
 OAK BROOK IL  
 60523  
 US

A M CASTLE		110502703		4075		INCLUSION		Serial:20170220-0110502703		Pg 1of2	
CUSTOMER PURCHASE ORDER NO. & ITEM 410933						Constellium ORDER NO. 196570					
ALLOY 7075	CLAD	TEMPER T651	GAUGE 1.25000 in 31.75 mm	WIDTH 48.50000 in 1.232 mm	LENGTH 144.50000 in 3.670 mm		<b>CERTIFICATION</b> "Constellium Rolled Products, hereby certifies that metal shipped under this order has been inspected and found in conformance with the requirements of the applicable specifications as indicated herein. Any warranty is limited to that shown on Constellium Rolled Products' standard General Terms and Conditions of Sales. Test reports are on file, subject to examination." Constellium Rolled Products Ravenswood, LLC 859 Century Road P.O. BOX 68 RAVENSWOOD, WV 26164 USA   Steve Good - Laboratory Manager				
ITEM ORDERED SPEC PLATE, SAWED MILL FINISH											
CUSTOMER SPECIFICATION AMS 4045K											
PART NUMBER 752114			B/L NUMBER 75896		DATE SHIPPED 02/21/2017						
WT. SHIPPED 2670.000 LB		NO. OF PIECES 000003		GOVT. CONTRACT NO.							

## ALL LOTS ON THIS CERTIFICATION ALSO CONFORM TO THE FOLLOWING REQUIREMENTS:

ASTM B594 REV 13 2013 100% SONIC W/ 0.125" DEADZONE Class A  
 AMS QQ-A-250/12A  
 AMS STD-2154A 2012 TYPE1 CLASS A 100% SONIC MINUS DEADZONE  
 ASTM B209-14  
 BSS-7055B 2013 CLASS A 100% SONIC TESTED MINUS DEADZONE  
 CMMP025 REV U  
 CSTI006 REV E 2011 CLASS A 100% SONIC MINUS DEADZONE  
 DPS 4 713 REV AK 2012 CLASS A 100% SONIC MINUS DEADZONE  
 GAMP5 9101 REV B 2006 CLASS A 100% SONIC MINUS DEADZONE  
 PS 21211P 2010 CLASS A 100% SONIC MINUS DEADZONE

## Load Details

Package	Net Lbs	Kg	Lot	Piece	Serial	Parent Lot
1001453411	890.000	403.697	9382341	DA51		
1001453411	890.000	403.697	9382341	502		
1001453411	890.000	403.697	9382341	8-893		

Lot: 9382341

## Tensile - Room Temperature (US)

		Ultimate (KSI)		Yield (KSI)		Elongation (%)		Report
Direction	Tests	Min	Max	Min	Max	Min	Max	
LT	02	81.3	81.6	71.5	71.8	13.0	13.0	



# Constellium



## CERTIFIED TEST REPORT Constellium Rolled Products Ravenswood, LLC

**S H I P T O**  
A M CASTLE & COMPANY  
4175 ROYAL DRIVE  
KENNESAW GA  
30144  
US

**S O L D T O**  
A M CASTLE  
1420 KENSINGTON ROAD, SUITE 220  
OAK BROOK IL  
60523  
US

A M CASTLE 110502703 4075 INCLUSION Serial:20170220-0110502703 Pg 2of2

CUSTOMER PURCHASE ORDER NO. & ITEM  
410933

Constellium ORDER NO.  
196570

ALLOY	CLAD	TEMPER	GAUGE	WIDTH	LENGTH
7075		T651	1.25000 in 31.75 mm	48.50000 in 1,232 mm	144.50000 in 3,670 mm

ITEM ORDERED  
SPEC PLATE, SAWED  
MILL FINISH

CUSTOMER SPECIFICATION  
AMS 4045K

PART NUMBER	B/L NUMBER	DATE SHIPPED
752114	75896	02/21/2017

WT. SHIPPED	NO. OF PIECES	GOVT. CONTRACT NO.
2670.000 LB	000003	

### CERTIFICATION

"Constellium Rolled Products, hereby certifies that metal shipped under this order has been inspected and found in conformance with the requirements of the applicable specifications as indicated herein. Any warranty is limited to that shown on Constellium Rolled Products' standard General Terms and Conditions of Sales. Test reports are on file, subject to examination."  
Constellium Rolled Products Ravenswood, LLC  
859 Century Road  
P.O. BOX 68  
RAVENSWOOD, WV 26164 USA

Steve Good - Laboratory Manager

### Tensile - Room Temperature (SI)

		Ultimate (N/MM2)		Yield (N/MM2)		Elongation (%)		Report
Direction	Tests	Min	Max	Min	Max	Min	Max	
LT	02	561	563	493	495	13.0	13.0	

### Chemistry (Actual)

	SI	FE	CU	MN	MG	CR	ZN	TI	ZR
Core	0.06	0.17	1.52	0.03	2.58	0.21	5.58	0.04	0.01

OTHERS-EACH: .05 MAX. OTHERS TOTAL: .15 MAX. AL REMAINDER

All material contained in this lot was cast and manufactured in the USA

QUALITY TEXTS:  
AMC CA 15403A R 7

THIS TEST REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF THE LABORATORY OR AUTHORIZED QUALITY DELEGATE. THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THE CERTIFICATE MAY BE PUNISHED AS A FELONY UNDER FEDERAL LAW.

CHEMISTRY BY OES: ARKSPARK

CHEMISTRIES REPORTED IN PERCENTAGE BY WEIGHT

WHEN FRACTURE TOUGHNESS TEST REQUIRED, TESTED PER ASTM E399

WHEN TENSILE TEST REQUIRED, TESTED PER ASTM E8; B557

DUNS Number: 090570149; CAGE Code: 1YW19

Mercury is not a normal contaminant in aluminum alloys and neither mercury nor any of its compounds were utilized in the manufacture of our product.

"END OF CERTIFICATION"

B3-8-2

Constellium


**CERTIFIED TEST REPORT**  
 Constellium Rolled Products  
 Ravenswood, LLC
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P  
T  
O

A M CASTLE &amp; COMPANY

 4175 ROYAL DRIVE  
 KENNESAW GA  
 30144  
 US
S  
O  
L  
D  
T  
O

A M CASTLE

 1420 KENSINGTON ROAD, SUITE 220  
 OAK BROOK IL  
 60523  
 US

A M CASTLE		110502703		4075		INCLUSION		Serial:20170220-0110502703		Pg 1of2	
CUSTOMER PURCHASE ORDER NO. & ITEM 410933						Constellium ORDER NO. 196570					
ALLOY 7075	CLAD	TEMPER T651	GAUGE 1.25000 in 31.75 mm	WIDTH 48.50000 in 1.232 mm	LENGTH 144.50000 in 3,670 mm		<b>CERTIFICATION</b> "Constellium Rolled Products, hereby certifies that metal shipped under this order has been inspected and found in conformance with the requirements of the applicable specifications as indicated herein. Any warranty is limited to that shown on Constellium Rolled Products' standard General Terms and Conditions of Sales. Test reports are on file, subject to examination." Constellium Rolled Products Ravenswood, LLC 859 Century Road P.O. BOX 68 RAVENSWOOD, WV 26164 USA    Steve Good - Laboratory Manager				
ITEM ORDERED SPEC PLATE, SAWED MILL FINISH											
CUSTOMER SPECIFICATION AMS 4045K											
PART NUMBER 752114		B/L NUMBER 75896		DATE SHIPPED 02/21/2017							
WT. SHIPPED 2670.000 LB		NO. OF PIECES 000003		GOVT. CONTRACT NO.							

## ALL LOTS ON THIS CERTIFICATION ALSO CONFORM TO THE FOLLOWING REQUIREMENTS:

ASTM B594 REV 13 2013 100% SONIC W/ 0.125" DEADZONE Class A  
 AMS QQ-A-250/12A  
 AMS-STD-2154A 2012 TYPE1 CLASS A 100% SONIC MINUS DEADZONE  
 ASTM B209-14  
 BSS-7055B 2013 CLASS A 100% SONIC TESTED MINUS DEADZONE  
 CMMP025 REV U  
 CSTI006 REV E 2011 CLASS A 100% SONIC MINUS DEADZONE  
 DPS 4 713 REV AK 2012 CLASS A 100% SONIC MINUS DEADZONE  
 GAMPS 9101 REV B 2006 CLASS A 100% SONIC MINUS DEADZONE  
 PS 21211P 2010 CLASS A 100% SONIC MINUS DEADZONE

## Load Details

Package	Net Lbs	Kg	Lot	Piece	Serial	Parent Lot
1001453411	890.000	403.697	9382341	01		
1001453411	890.000	403.697	9382341	02		
1001453411	890.000	403.697	9382341	03		

## Lot: 9382341

## Tensile - Room Temperature (US)

		Ultimate (KSI)		Yield (KSI)		Elongation (%)		Report
Direction	Tests	Min	Max	Min	Max	Min	Max	
LT	02	81.3	81.6	71.5	71.8	13.0	13.0	

# Constellium

Accredited  
**Nadcap**  
Materials Testing Laboratory

## CERTIFIED TEST REPORT Constellium Rolled Products Ravenswood, LLC

S  
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P  
  
T  
O


A M CASTLE & COMPANY

4175 ROYAL DRIVE  
KENNESAW GA  
30144  
US

S  
O  
L  
D  
  
T  
O

A M CASTLE

1420 KENSINGTON ROAD, SUITE 220  
OAK BROOK IL  
60523  
US

A M CASTLE		110502703		4075		INCLUSION		Serial: 20170220-0110502703		Pg 2 of 2																															
CUSTOMER PURCHASE ORDER NO. & ITEM 410933						Constellium ORDER NO. 196570			<b>CERTIFICATION</b> "Constellium Rolled Products, hereby certifies that metal shipped under this order has been inspected and found in conformance with the requirements of the applicable specifications as indicated herein. Any warranty is limited to that shown on Constellium Rolled Products' standard General Terms and Conditions of Sales. Test reports are on file, subject to examination." Constellium Rolled Products Ravenswood, LLC 859 Century Road P.O. BOX 68 RAVENSWOOD, WV 26164 USA    Steve Good - Laboratory Manager																																
ALLOY 7075	CLAD	TEMPER T651	GAUGE 1.25000 in 31.75 mm	WIDTH 48.50000 in 1,232 mm	LENGTH 144.50000 in 3,670 mm																																				
ITEM ORDERED SPEC PLATE, SAWED MILL FINISH																																									
CUSTOMER SPECIFICATION AMS 4045K																																									
PART NUMBER 752114			B/L NUMBER 75896		DATE SHIPPED 02/21/2017																																				
WT. SHIPPED 2670 000 LB		NO. OF PIECES 000003		GOVT. CONTRACT NO.																																					
<b>Tensile - Room Temperature (SI)</b> <table border="1"> <thead> <tr> <th colspan="2"></th> <th colspan="2">Ultimate (N/MM2)</th> <th colspan="2">Yield (N/MM2)</th> <th colspan="2">Elongation (%)</th> <th colspan="2">Report</th> </tr> <tr> <th>Direction</th> <th>Tests</th> <th>Min</th> <th>Max</th> <th>Min</th> <th>Max</th> <th>Min</th> <th>Max</th> <th colspan="2"></th> </tr> </thead> <tbody> <tr> <td>LT</td> <td>02</td> <td>561</td> <td>563</td> <td>493</td> <td>495</td> <td>13.0</td> <td>13.0</td> <td colspan="2"></td> </tr> </tbody> </table>														Ultimate (N/MM2)		Yield (N/MM2)		Elongation (%)		Report		Direction	Tests	Min	Max	Min	Max	Min	Max			LT	02	561	563	493	495	13.0	13.0		
		Ultimate (N/MM2)		Yield (N/MM2)		Elongation (%)		Report																																	
Direction	Tests	Min	Max	Min	Max	Min	Max																																		
LT	02	561	563	493	495	13.0	13.0																																		
<b>Chemistry (Actual)</b> <table border="1"> <thead> <tr> <th></th> <th>SI</th> <th>FE</th> <th>CU</th> <th>MN</th> <th>MG</th> <th>CR</th> <th>ZN</th> <th>TI</th> <th>ZR</th> </tr> </thead> <tbody> <tr> <td>Core</td> <td>0.06</td> <td>0.17</td> <td>1.52</td> <td>0.03</td> <td>2.58</td> <td>0.21</td> <td>5.58</td> <td>0.04</td> <td>0.01</td> </tr> </tbody> </table>													SI	FE	CU	MN	MG	CR	ZN	TI	ZR	Core	0.06	0.17	1.52	0.03	2.58	0.21	5.58	0.04	0.01										
	SI	FE	CU	MN	MG	CR	ZN	TI	ZR																																
Core	0.06	0.17	1.52	0.03	2.58	0.21	5.58	0.04	0.01																																
OTHERS-EACH: .05 MAX. OTHERS TOTAL: .15 MAX. AL REMAINDER																																									
All material contained in this lot was cast and manufactured in the USA																																									
QUALITY TEXTS: AMC CA 15403A R 7																																									
THIS TEST REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF THE LABORATORY OR AUTHORIZED QUALITY DELEGATE. THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THE CERTIFICATE MAY BE PUNISHED AS A FELONY UNDER FEDERAL LAW. CHEMISTRY BY OES: ARKSPARK CHEMISTRIES REPORTED IN PERCENTAGE BY WEIGHT WHEN FRACTURE TOUGHNESS TEST REQUIRED, TESTED PER ASTM E399 WHEN TENSILE TEST REQUIRED, TESTED PER ASTM E8; B557 DUNS Number: 090570149; CAGE Code: 1YW19 Mercury is not a normal contaminant in aluminum alloys and neither mercury nor any of its compounds were utilized in the manufacture of our product. "END OF CERTIFICATION"																																									
P-860-155D REVISED: 10 2014																																									

# Certified Inspection Report

04/24/15  
13:02:57

Customer  
**Castle A M & Co**

Customer P.O. No.  
**336828**

Customer Part No.  
**(21391)**

Alcoa Order No.  
**MMC-B5610-001**

Govt. Contract No.

**Alcoa Inc.**  
**Massena Operations**  
**Park Avenue East, Massena, NY 13662**



Ship To **A M Castle & Company**  
**3050 South Hydraulic**  
**Wichita, KS 67216**

We hereby certify that the material covered in this report has been inspected in accordance with, and has been found to meet the applicable requirements described herein, including any specifications forming a part of the description, or as previously agreed to with customer and that samples representative of the material met the composition limits and have the mechanical properties shown on the face of this sheet. Manufactured under a quality management system registered to ISO 9001:2008 and AS9100. Melted and manufactured in the USA.

*Steven F. Marsh*  
Steven F. Marsh, Quality Manager

Date Shipped **04/24/15**

Weight Shipped **876 lbs**

Product **CFRB-CF RECT**

BOL **000162890**

Alloy - Temper **7075-T651**

Size **3.00000 x 4.00000 IN**

Shape **REC**

Config **12 FT**

ORR

Specifications:

A97075-40 Rev 15 w/exceptions & comments  
per Z. Wang email dtd 10/8/12  
ASTM B21-12E1  
AMS4123H  
Q9-A-325/9E  
AMS-QQ-A-225/9A  
Material conforms to 16 reqmts

## TEST REQUIREMENTS

Test	Test	Test	Test	Test	Test	Test	Test	Test	Test
U.T.S.	T.Y.S.	%Elong							
Max:									
Min:									

## Test Results

Lot / Mark	No. of Tests	Test	Test	Test	Test	Test	Test	Test	Test
MA20150736	1	U.T.S.	T.Y.S.	%Elong					
		Max: 083.9	76.9	14.0					
		Min: 083.9	76.9	14.0					

## TEST ABBREVIATIONS

U.T.S. Ultimate Tensile Strength KSI

T.Y.S. Tensile Yield Strength KSI .2% offset

Aluminum Association Chemical Composition Limits (in Weight %)

Alloy	%SI	%FE	%CU	%MN	%MG	%CR	%ZN	%TI	%Others	%Others	%AL
7075	MAX 0.40	0.50	2.0	0.30	2.9	0.28	6.1	0.20	0.05	0.15	Rem
	MIN		1.2		2.1	0.18	5.1		Each	Total	

## Actual Started Chemistry

LOT/WORK ORDER	%SI	%FE	%CU	%MN	%MG	%CR	%ZN	%TI	%OE	%OT	%AL
MA20150736	MAX 0.05	0.14	1.7	0.02	2.5	0.20	5.8	0.03	LT 0.05	LT 0.15	Rem
	MIN 0.05	0.12	1.6	0.02	2.5	0.20	5.8	0.02			

## NOTES:

Material compliant with DFARS 252.225-7001 (Buy American Act)  
Mercury is not a normal contaminant in aluminum alloys and neither is any of its compounds are used in the manufacture of our product.  
This alloy meets the requirements of EU 2011/65/EC (RoHS) and EU 2000/53/EC for lead, mercury, cadmium and hexavalent chromium.



# Certified Inspection Report

04/24/15  
13:02:57

Alcoa Inc.

Massena Operations  
Park Avenue East, Massena, NY 13662



Customer  
**Castle A M & Co**

Customer P.O. No.  
**336828**

Customer Part No.  
**(21391)**

Alcoa Order No.  
**MMC-B5610-001**

Gov. Contract No.

ALCOA

Ship To **A M Castle & Company**

**3050 South Hydraulic  
Wichita, KS 67216**

We hereby certify that the material covered in this report has been inspected in accordance with, and has been found to meet the applicable requirements described herein, including any specifications forming a part of the description, or as previously agreed to with customer and that samples representative of the material met the composition limits and have the mechanical properties shown on the face of this sheet. Manufactured under a quality management system registered to ISO 9001:2008 and AS9100. Melted and manufactured in the USA.

*Steven F. Marsh*  
Steven F. Marsh, Quality Manager

Date Shipped	<b>04/24/15</b>	Weight Shipped	<b>876 lbs</b>	Product	<b>CFRB-CF RECT</b>	Specific Length		BOL	<b>000162890</b>
Alloy - Temper	<b>7075-T651</b>	Size	<b>3.00000 x 4.00000 IN</b>	Shape	<b>REC</b>	Config	<b>12 FT</b>	QRR	

Specifications:  
A97075-40 Rev 15 w/exceptions & comments  
Per Z. Wang email dtd 10/8/12  
ASTM B21-12E1  
AMS4123H  
QQ-A-225/9E  
AMS-OQ-A-225/9A  
Material conforms to T6 reqmts

TEST REQUIREMENTS	Test	Test	Test	Test	Test	Test	Test	Test	Test	Test
	U.T.S.	T.Y.S.	%Elong							
Max:										
Min:	<b>77.0</b>	<b>66.0</b>	<b>07.0</b>							

Test Results	No. of Tests	Test	Test	Test	Test	Test	Test	Test	Test	Test
		U.T.S.	T.Y.S.	%Elong						
Lot / Work Order										
<b>MA20150736</b>	<b>1</b>	<b>083.9</b>	<b>76.9</b>	<b>14.0</b>						
Max:		<b>083.9</b>	<b>76.9</b>	<b>14.0</b>						
Min:		<b>083.9</b>	<b>76.9</b>	<b>14.0</b>						

TEST ABBREVIATIONS  
U.T.S. Ultimate Tensile Strength KSI  
T.Y.S. Tensile Yield Strength KSI .2% offset  
%Elong Elongation % in 2"

Aluminum Association Chemical Composition Limits (in Weight %)	T.Y.S.	Tensile Yield Strength KSI	.2% offset	%Elong	Elongation % in 2"
Alloy					
<b>7075</b>					
MAX	<b>0.40</b>	<b>0.50</b>	<b>2.0</b>	<b>0.30</b>	<b>2.9</b>
MIN		<b>1.2</b>		<b>0.28</b>	<b>6.1</b>
				<b>0.18</b>	<b>5.1</b>
				<b>0.20</b>	<b>0.05</b>
				<b>0.15</b>	<b>Rem</b>
				<b>Total</b>	

LOT/WORK ORDER	%SI	%FE	%CU	%MN	%MG	%CR	%ZN	%TI	%Others	%Others	%AL
<b>MA20150736</b>											
MAX	<b>0.05</b>	<b>0.14</b>	<b>1.7</b>	<b>0.02</b>	<b>2.5</b>	<b>0.20</b>	<b>5.8</b>	<b>0.03</b>	<b>LT 0.05</b>	<b>LT 0.15</b>	<b>Rem</b>
MIN	<b>0.05</b>	<b>0.12</b>	<b>1.6</b>	<b>0.02</b>	<b>2.5</b>	<b>0.20</b>	<b>5.8</b>	<b>0.02</b>			

## NOTES:

Material compliant with DEARS 252.225-7001 (Buy American Act)  
Mercury is not a normal contaminant in aluminum alloys and neither is nor any of its compounds are used in the manufacture of our product.  
This alloy meets the requirements of EU 2011/65/EC (RoHS) and EU 2000/53/EC for lead, mercury, cadmium and hexavalent chromium.



# Constellium

Accredited  
**Nadcap**  
Metals Testing Laboratory

## CERTIFIED TEST REPORT

Constellium Rolled Products  
Ravenswood, LLC

**SHIP TO**  
A M CASTLE & COMPANY  
4175 ROYAL DRIVE  
KENNESAW GA  
30144  
US

**SOLD TO**  
A M CASTLE  
1420 KENSINGTON ROAD, SUITE 220  
OAK BROOK IL  
60523  
US

A M CASTLE 110502703 4075 INCLUSION Serial:20170220-0110502703 Pg 1of2

CUSTOMER PURCHASE ORDER NO. & ITEM  
410933

Constellium ORDER NO.  
196570

### CERTIFICATION

"Constellium Rolled Products, hereby certifies that metal shipped under this order has been inspected and found in conformance with the requirements of the applicable specifications as indicated herein. Any warranty is limited to that shown on Constellium Rolled Products' standard General Terms and Conditions of Sales. Test reports are on file, subject to examination."

Constellium Rolled Products Ravenswood, LLC  
859 Century Road  
P.O. BOX 68  
RAVENSWOOD, WV 26164 USA



Steve Good - Laboratory Manager

ALLOY	CLAD	TEMPER	GAUGE	WIDTH	LENGTH
7075		T651	1.2500 in 31.75 mm	48.5000 in 1232 mm	144.5000 in 3670 mm

ITEM ORDERED  
SPEC PLATE, SAWED  
MILL FINISH

CUSTOMER SPECIFICATION  
AMS 4045K

PART NUMBER  
752114

B/L NUMBER  
75896

DATE SHIPPED  
02/21/2017

WT. SHIPPED  
2670.000 LB

NO. OF PIECES  
000033

GOVT. CONTRACT NO.

ALL LOTS ON THIS CERTIFICATION ALSO CONFORM TO THE FOLLOWING REQUIREMENTS:

ASTM B594 REV 15 10"3 100% SONIC W/ 0.125"DEADZONE Class A  
AMS QQ-A-250/12A  
AMS-STD-2134A 2012 TYPE1 CLASS A 100% SONIC MINUS DEADZONE  
ASTM B209-14  
BSS-7055B 2013 CLASS A 100% SONIC TESTED MINUS DEADZONE  
CMMP025 REV U  
CST1006 REV E 2011 CLASS A 100% SONIC MINUS DEADZONE  
DPS 4 713 REV AK 2012 CLASS A 100% SONIC MINUS DEADZONE  
GAMPS 9101 REV B 2006 CLASS A 100% SONIC MINUS DEADZONE  
PS 2121P 2010 CLASS A 100% SONIC MINUS DEADZONE

### Load Details

Package	Net Lbs	Kg	Lot	Piece	Serial	Parent Lot
1001453411	890.000	403.697	9382341	01		
1001453411	890.000	403.697	9382341	02		
1001453411	890.000	403.697	9382341	03		

Lot: 9382341 **DAS 5**

Tensile - Room Temperature (US)

Direction	Tests	Ultimate (KSI)		Yield (KSI)		Elongation (%)		Report
		Min	Max	Min	Max	Min	Max	
LI	02	81.3	81.6	71.5	71.8	13.0	13.0	

# Constellium

Approved  
**Nadcap**  
Materials Testing Laboratory

## CERTIFIED TEST REPORT

Constellium Rolled Products  
Ravenswood, LLC

**S H I P T O**  
A M CASTLE & COMPANY  
4175 ROYAL DRIVE  
KENNESAW GA  
30144  
US

**S O L D T O**  
A M CASTLE  
1420 KENSINGTON ROAD, SUITE 220  
OAK BRIDGE  
60523  
US

A M CASTLE 110502703 4075 INCLUSION Serial:20170220-0110502703 Pg 2of2

CUSTOMER PURCHASE ORDER NO. & ITEM 410933				Constellium ORDER NO. 196570		<b>CERTIFICATION</b> "Constellium Rolled Products, hereby certifies that metal shipped under this order has been inspected and found in conformance with the requirements of the applicable specifications as indicated herein. Any warranty is limited to that shown on Constellium Rolled Products' standard General Terms and Conditions of Sales. Test reports are on file, subject to examination." Constellium Rolled Products Ravenswood, LLC 859 Century Road P.O. BOX 68 RAVENSWOOD, WV 26164 USA   Steve Good - Laboratory Manager	
ALLOY 7075	CLAD	TEMPER T651	GAUGE 1.25000 in 31.75 mm	WIDTH 48.50000 in 1232 mm	LENGTH 144.50000 in 3670 mm		
ITEM ORDERED SPEC PLATE SAWED MILL FINISH							
CUSTOMER SPECIFICATION AMS 4045K							
PART NUMBER 752114		B/L NUMBER 75896		DATE SHIPPED 02/21/2017			
WT SHIPPED 2670.000 LB		NO. OF PIECES 000003		GOVT. CONTRACT NO.			

Tensile - Room Temperature (SI)							
		Ultimate (N/MM2)		Yield (N/MM2)		Elongation (%)	
Direction	Tests	Min	Max	Min	Max	Min	Max
LT	02	561	563	493	495	13.0	13.0

Chemistry (Actual)									
	SI	FE	CU	MN	MG	CR	ZN	TI	ZR
Core	0.06	0.17	1.52	0.03	2.58	0.21	5.58	0.04	0.01

OTHERS-EACH: .05 MAX, OTHERS TOTAL: .15 MAX, AL REMAINDER

All material contained in this lot was cast and manufactured in the USA

QUALITY TEXTS:  
AMC CA 15403A R 7

THIS TEST REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF THE LABORATORY OR AUTHORIZED QUALITY DELEGATE. THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THE CERTIFICATE MAY BE PUNISHED AS A FELONY UNDER FEDERAL LAW.

CHEMISTRY BY OES: ARKSPARK

CHEMISTRIES REPORTED IN PERCENTAGE BY WEIGHT

WHEN FRACTURE TOUGHNESS TEST REQUIRED, TESTED PER ASTM E399

WHEN TENSILE TEST REQUIRED, TESTED PER ASTM E8; B557

DUNS Number: 090570149, CAGE Code: 1YWL9

Mercury is not a normal contaminant in aluminum alloys and neither mercury nor any of its compounds were utilized in the manufacture of our product.

"END OF CERTIFICATION"



# MATERIAL RECEIPT INSPECTION FORM

MATERIAL: 170751651 250x10 1000  
 DATE: AUG 15 2017

PO / BATCH NO.: PO30986/M138202/164013

MATERIAL CERT REC'D: yes  
 QUANTITY RECEIVED: 12'  
 QUANTITY INSPECTED: 12'  
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 1.250"  
 THICKNESS RECEIVED: 1.138  
 SHEET SIZE ORDERED: N/A  
 SHEET SIZE RECEIVED: N/A

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
CORRECT FINISH	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/>	
CORROSION	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
CORRECT GRAIN DIRECTION	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/>	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/>	AMS QQ A 250/12
CORRECT THICKNESS	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/>	
PHOTO REQUIRED	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
CORRECT REF # TO LINK CERT	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/>	HT #9383341
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/>	
CORRECT M# ON THE MATERIAL	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/>	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

<b>QC 18 INSPECTION</b>	<b>ENGINEERING SIGNOFF (if required)</b>
INSPECTED BY: <u>DAS 5</u> DATE: <u>AUG 15 2017</u>	SIGNED OFF BY: _____ DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

**SPECIFICATION CONTROL DRAWING**

**PURCHASE MATERIAL:** 7075-T6/T62/T651 ALUMINUM SHEET OR PLATE

**SPECIFICATION:**

QQ-A-250/12 OR AMS-QQ-A-250/12  
OR AMS 4046  
OR ASTM B209

OR

**PURCHASE MATERIAL:** 7075-T6/T62/T651 ALCLAD ALUMINUM SHEET OR PLATE

**SPECIFICATION:**

QQ-A-250/13 OR AMS-QQ-A-250/13  
OR AMS 4048 / 4049  
OR ASTM B209

**PART NUMBER:**

M7075T6S | TTT | X | W | WWW |  
| THK | | WIDTH |

WHERE "TTT" = THICKNESS (IN INCHES)  
AND "W.WWW" = WIDTH (IN INCHES, OPTIONAL, FOR SPECIFYING CUT PLATE)

EG. 0.063" THICK SHEET = M7075T6S.063

EG. 3.5" WIDE BY 0.500" THICK PLATE = M7075T6S.500X3.500

**PREFERRED SIZE:**

.TTT BY 4FT BY 10FT FOR SHEET

**RELEASED**

2017 JUN 19  
ECN 17-574

B	ADD. REF. TO "PLATE" "T651" TEMPER, AMS 4048, OPTIONAL WIDTH DIM (CAR16-149)	CP	17.05.05
A	NEW ISSUE	RF	10.11.08
REV.	DESCRIPTION	BY	DATE
DESIGN	RF	DART AEROSPACE LTD	
DRAWN	CP	HAWKESBURY, ONTARIO, CANADA	
CHECKED	ML	DRAWING NO.	
MFG. APPR.	LL	M7075T6S	
APPROVED	WM	TITLE	
DE APPR.	DS	7075-T6 SHEET/PLATE SPEC	
DATE	17.05.05	SCALE	
		SHEET 1 OF 1	
		REV. B	
		NTS	
COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS UNCLASSIFIED EXCEPT WHERE SHOWN OTHERWISE NOT TO BE RELEASED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT THE WRITTEN PERMISSION FROM DART AEROSPACE LTD			

APPROVED

# MATERIAL RECEIPT INSPECTION FORM

MATERIAL: 1170751651250X12.000  
 DATE: AUG 15 2017

PO / BATCH NO.: 0030986/11380/164013


MATERIAL CERT REC'D: yes  
 QUANTITY RECEIVED: 12'  
 QUANTITY INSPECTED: 12'  
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 1.250  
 THICKNESS RECEIVED: 1.235  
 SHEET SIZE ORDERED:   
 SHEET SIZE RECEIVED: N/A

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	<input checked="" type="radio"/> N	
CORRECT FINISH	<input checked="" type="radio"/> Y	N	
CORROSION	Y	<input checked="" type="radio"/> N	
CORRECT GRAIN DIRECTION	<input checked="" type="radio"/> Y	N	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="radio"/> Y	N	AMS QQA 250/12
CORRECT THICKNESS	<input checked="" type="radio"/> Y	N	
PHOTO REQUIRED	Y	<input checked="" type="radio"/> N	
CORRECT REF # TO LINK CERT	<input checked="" type="radio"/> Y	N	77# 9382391
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="radio"/> Y	N	
CORRECT M# ON THE MATERIAL	<input checked="" type="radio"/> Y	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	<input checked="" type="radio"/> N	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	<input checked="" type="radio"/> N	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

*testers located in the Quality Office*

<b>QC 18 INSPECTION</b>		<b>ENGINEERING SIGNOFF (if required)</b>	
INSPECTED BY: <u></u> DATE: <u>AUG 15 2017</u>	SIGNED OFF BY: _____ DATE: _____		

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL: 7075-T6/T62/T651 ALUMINUM SHEET OR PLATE  
SPECIFICATION: QQ-A-250/12 OR AMS-QQ-A-250/12  
OR AMS 4045  
OR ASTM B209

OR

PURCHASE MATERIAL: 7075-T6/T62/T651 ALCLAD ALUMINUM SHEET OR PLATE  
SPECIFICATION: QQ-A-250/13 OR AMS-QQ-A-250/13  
OR AMS 4048 / 4049  
OR ASTM B209

PART NUMBER: M7075T6S | TTT | X | W.WWW |  
THK | WIDTH

WHERE "TTT" = THICKNESS (IN INCHES)  
AND "W.WWW" = WIDTH (IN INCHES, OPTIONAL FOR SPECIFYING CUT PLATE)

EG. 0.063" THICK SHEET = M7075T6S.063  
EG. 3.5" WIDE BY 0.500" THICK PLATE = M7075T6S.500X3.500  
TTT BY 4FT BY 10FT FOR SHEET

RELEASED

2017 JUN 19  
ECN 17-574

B	ADD. REF TO "PLATE" "T651" TEMPER, AMS 4048, OPTIONAL WIDTH DIM (CARTG-149)	CP	17.05.05
A	NEW ISSUE	RF	10.11.06
REV.	DESCRIPTION	BY	DATE
DESIGN	RF		
DRAWN	CP		
CHECKED	ML		
MFG. APPR.	LL		
APPROVED	WM		
DE APPR.	DS		
DATE	17.05.05		
DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA			
DRAWING NO. M7075T6S			
REV. B			
SHEET 1 OF 1			
TITLE			
7075-T6 SHEET/PLATE SPEC NTS			
SCALE			
COPYRIGHT © 2017 BY DART AEROSPACE LTD. ALL RIGHTS RESERVED. NO PART OF THIS DOCUMENT MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT PERMISSION IN WRITING FROM DART AEROSPACE LTD.			

# MATERIAL RECEIPT INSPECTION FORM

MATERIAL: 17075+6B3,000X4,000

PO / BATCH NO.: P036986/M138202/164013

DATE: AUG 16 2017

MATERIAL CERT REC'D: yes

THICKNESS ORDERED: 3'X4"

QUANTITY RECEIVED: 12'

THICKNESS RECEIVED: 3'X4"

QUANTITY INSPECTED: 12'

SHEET SIZE ORDERED: N/A

QUANTITY REJECTED: 0

SHEET SIZE RECEIVED: N/A

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	<input checked="" type="checkbox"/>	
CORRECT FINISH	<input checked="" type="checkbox"/>	N	
CORROSION	Y	<input checked="" type="checkbox"/>	
CORRECT GRAIN DIRECTION	<input checked="" type="checkbox"/>	N	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="checkbox"/>	N	AMS aa 4 225/9
CORRECT THICKNESS	<input checked="" type="checkbox"/>	N	
PHOTO REQUIRED	Y	<input checked="" type="checkbox"/>	
CORRECT REF # TO LINK CERT	<input checked="" type="checkbox"/>	N	HT # MA20150736
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="checkbox"/>	N	
CORRECT M# ON THE MATERIAL	<input checked="" type="checkbox"/>	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	<input checked="" type="checkbox"/>	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	<input checked="" type="checkbox"/>	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
TYPE OF MATERIAL	HRC	HRB	DUR A	DUR D	WEBSTER
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

*testers located in the Quality Office*

<b>QC 18 INSPECTION</b>		<b>ENGINEERING SIGNOFF (if required)</b>	
INSPECTED BY: <u>DAS</u> <u>5</u> DATE: <u>9-89</u> <u>AUG 16 2017</u>	SIGNED OFF BY: _____ DATE: _____		

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in



DESIGN <i>[Signature]</i>	DRAWN BY <i>LE</i>	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>PH</i>	APPROVED <i>[Signature]</i>	DRAWING NO. 7075T6B	REV. B SHEET 1 OF 1
DATE 06.11.24		TITLE 7075-T6 BAR	SCALE NTS
A	05.07.20	NEW ISSUE	
B	06.11.24	REMOVED "ROUND" FROM BAR DESCRIPTION	

**RELEASED**  
*06.11.24* *[Signature]*

PURCHASE MATERIAL: 7075-T6 (OR ~~T651/~~ T6510/ T6511/ T62) ALUMINUM BAR  
PER ~~AMS-QQ-A-225/9~~ (OR AMS 4122/ 4123/ 4186/ 4187) OR  
PER ~~AMS-QQ-A-200/11~~ DAS

**5**

9-89

PART NUMBER: M7075T6B

T.TTT

X

WW.WWW

WHERE T.TTT = THICKNESS IN INCHES  
WW.WWW = WIDTH IN INCHES

THICK

WIDTH

EG. 1.0" x 1.5" BAR = M7075T6B1.000X01.500

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Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

Purchase Order ID PO36986

Purchase Order Date 7/11/2017  
PO Print Date 7/11/2017

Page Number 1 of 5

Order From :

METAUX CASTLE  
P.O. BOX 4090 STN A  
TORONTO, ONTARIO M5W OE9  
CANADA

VU-MET002

Ship To : DART AEROSPACE LTD  
1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

E-MAILED  
JUL 12 2017

Contact Name

Vendor Phone

Ship To Contact

Ship To Phone

Ship Via:

Ship Acct:

FedEx PI collect

Buyer

Customer POID

Customer Tax #

Terms

Currency

FOB

Chantal Lavoie

10127-2607

Net 30

USD

Destination-Collect

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
1	D6101-007P  AS PER DWG D6101 REV. B B164013 MATERIAL: 7075-T7351 (QQ-A-250/12) SIZE: 7.750" X 8.250" X 2.50" THICK GRAIN DIRECTION ALONG: 7.750" LENGTH TOLERANCE AS PER QUOTE +.030"/-.000"	7075-T7351 8.25X7.75X2.5	7/28/2017  Yes 7/28/2017		20.00  Each	\$56.11	\$1,122.20
3	D6102-013P  AS PER DWG D6102 REV. D B164014 SIZE: 7.000" X 6.500" X 2.00" THICK GRAIN DIRECTION ALONG 6.500" MATERIAL 6061-T6/T6511 QQ-A-250/11 TOLERANCE AS PER QUOTE +.030"/-.000"	6061-T6 7.0X6.5X2.0	7/28/2017  Yes 7/28/2017		60.00  Each	\$31.65	\$1,899.00
Line Total:							\$1,122.20

Note:

7/11/2017





Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

# PURCHASE ORDER

Purchase Order ID PO36986

Purchase Order Date 7/11/2017

PO Print Date 7/11/2017

Page Number 2 of 5

Order From :

METAUX CASTLE  
P.O. BOX 4090 STN A  
TORONTO, ONTARIO M5W OE9  
CANADA

VU-MET002

Ship To : DART AEROSPACE LTD  
1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

Contact Name

Vendor Phone

Ship To Contact

Ship To Phone

Ship Via:

FedEx PI collect

Ship Acct:

Buyer

Customer POID

Customer Tax #

Terms

Currency

FOB

Chantal Lavoie

10127-2607

Net 30

USD

Destination-Collect

Line Total: \$1,899.00

4 D6104-007P

17-4 SS Roundbar 4.50"Od

7/28/2017

Yes

7/28/2017

10.00  
Each

\$68.53 \$685.30

AS PER DWG D6104 REV. B  
B164015

MATERIAL: 17-4 PH AS PER AMS 4643 OR AISI 630  
SIZE: 4.50" X 5.10" LONG

Line Total: \$685.30

5 M7075T6S1.250X10.000

7075-T6S Sheet 1.250"  
THICK x 10.000" WIDE

7/28/2017 FN

Yes

7/28/2017

12.00

\$76.40 \$916.80

MAT'L 7075-T6/T62 ALUMINUM SHEET  
SPECS QQ-A-250/12 OR AMS-QQ-A-250/12 OR AMS 4045 OR PER ASTM B209

MAT'L 7075-T6/T62 ALCLAD ALUMINUM SHEET  
SPECS QQ-A-250/13 OR AMS-QQ-A-250/13 OR AMS 4049 OR PER ASTM B209

Line Total: \$916.80

Note:

7/11/2017



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

# PURCHASE ORDER

Purchase Order ID PO36986

Purchase Order Date 7/11/2017

PO Print Date 7/11/2017

Page Number 3 of 5

## Order From :

METAUX CASTLE  
P.O. BOX 4090 STN A  
TORONTO, ONTARIO M5W OE9  
CANADA

VU-MET002

Ship To : DART AEROSPACE LTD  
1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

Contact Name  
Vendor Phone

Ship To Contact

Ship To Phone

Ship Via:

Ship Acct:

FedEx PI collect

Buyer

Customer POID

Customer Tax #

Terms

Currency

FOB

Chantal Lavoie

10127-2607

Net 30

USD

Destination-Collect

6	M7075T6S1.250X12.000	7075-T6S Sheet 1.250" THICK x 12.000" WIDE	7/28/2017 FN	12.00	\$86.42	\$1,037.04
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Yes

7/28/2017

MAT'L 7075-T6/T62 ALUMINUM SHEET  
SPECS QQ-A-250/12 OR AMS-QQ-A-250/12 OR AMS 4045 OR PER ASTM B209

MAT'L 7075-T6/T62 ALCLAD ALUMINUM SHEET  
SPECS QQ-A-250/13 OR AMS-QQ-A-250/13 OR AMS 4049 OR PER ASTM B209

80 A-8-1

Line Total: \$1,037.04

7	M7075T6S2.000X6.000	7075-T6S Sheet 2.000" THICK x 6.000" WIDE	7/28/2017 FN	12.00	\$71.35	\$856.20
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Yes

7/28/2017

MAT'L 7075-T6/T62 ALUMINUM SHEET  
SPECS QQ-A-250/12 OR AMS-QQ-A-250/12 OR AMS 4045 OR PER ASTM B209

MAT'L 7075-T6/T62 ALCLAD ALUMINUM SHEET  
SPECS QQ-A-250/13 OR AMS-QQ-A-250/13 OR AMS 4049 OR PER ASTM B209

Line Total: \$856.20

Note:

7/11/2017



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

# PURCHASE ORDER

Purchase Order ID **PO36986**

Purchase Order Date 7/11/2017

PO Print Date 7/11/2017

Page Number 4 of 5

**Order From :**

METALX CASTLE  
P.O. BOX 4090 STN A  
TORONTO, ONTARIO M5W OE9  
CANADA

VU-MET002

**Ship To :** DART AEROSPACE LTD  
1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

Contact Name

Vendor Phone

Ship To Contact

Ship To Phone

Ship Via:

Ship Acct:

FedEx PI collect

Buyer

Customer POID

Customer Tax #

Terms

Currency

FOB

Chantal Lavoie

10127-2607

Net 30

USD

Destination-Collect

8	M7075T6S3.000X2.750	7075-T6S Sheet 3.000" thick x 2.750" wide	7/28/2017	12.00	\$52.42	\$629.04
		Yes	7/28/2017	f		

**Line Total:** \$629.04

9	M7075T6S1.750X4.500	M7075T6 SHEET 1.750 THICK X 4.500 WIDE	7/28/2017 FN	12.00	\$48.90	\$586.80
		Yes	7/28/2017	f		

MAT'L 7075-T6/T62 ALUMINUM SHEET  
SPECS QQ-A-250/12 OR AMS-QQ-A-250/12 OR AMS 4045 OR PER ASTM B209

MAT'L 7075-T6/T62 ALCLAD ALUMINUM SHEET  
SPECS QQ-A-250/13 OR AMS-QQ-A-250/13 OR AMS 4049 OR PER ASTM B209

**Line Total:** \$586.80

Note:

7/11/2017



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

# PURCHASE ORDER

Purchase Order ID PO36986

Purchase Order Date 7/11/2017

PO Print Date 7/11/2017

Page Number 5 of 5

## Order From :

METAUX CASTLE  
P.O. BOX 4090 STN A  
TORONTO, ONTARIO M5W OE9  
CANADA

VU-MET002

Ship To : DART AEROSPACE LTD  
1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

Contact Name

Vendor Phone

Ship To Contact

Ship To Phone

Ship Via:

FedEx PI collect

Ship Acct:

Buyer

Customer POID

Customer Tax #

Terms

Currency

FOB

Chantal Lavoie

10127-2607

Net 30

USD

Destination-Collect

10	M7075T6S3.000X4.000	7075-T6S Sheet 3.000" thick x 4.000" wide	7/28/2017	FN	12.00	\$94.85	\$1,138.20
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Yes

7/28/2017

7075-T6 BAR ACCEPTABLE

MAT'L 7075-T6/T62 ALUMINUM SHEET  
SPECS QQ-A-250/12 OR AMS-QQ-A-250/12 OR AMS 4045 OR PER ASTM B209

MAT'L 7075-T6/T62 ALCLAD ALUMINUM SHEET  
SPECS QQ-A-250/13 OR AMS-QQ-A-250/13 OR AMS 4049 OR PER ASTM B209

Line Total: \$1,138.20

11	71401-45	Procurement Quality Clauses	7/28/2017		1.00	\$0.00	\$0.00
----	----------	-----------------------------	-----------	--	------	--------	--------

No

7/28/2017

Procurement Quality Clauses

A005 right of entry

A012 chemical and physical test report

A016 personnel qualification

A017 raw material identification (as applicable)

A026 certification of material conformance

A041 quality management system

A042 dart notification by supplier

A043 retention of quality documents

Line Total: \$0.00

PO Total: \$8,870.58

Note: Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit [www.dartaerospace.com](http://www.dartaerospace.com) for further explanation.

Change Nbr: 2

Change Date: 7/11/2017

## Chantal Lavoie

**From:** Desbiens, Marc <mdesbien@amcastle.com>  
**Sent:** Monday, July 10, 2017 3:49 PM  
**To:** Chantal Lavoie  
**Subject:** RE: quote

Hi Chantal,

7075-t6 sheet or bar 1.250" x 10" x 12 ft

\$ 76.40 Ft 2-3 weeks (plate)

Thanks

Marc Desbiens  
Inside sales representative  
Castle Metals, Montreal, QC  
Direct line 514-795-8176  
1-800-806-6660 ext 52226  
Fax # 1-855-892-6370

*Customized Supply Chain Solutions for Your Metal Needs*

**From:** Desbiens, Marc [mailto:mdesbien@amcastle.com]  
**Sent:** Monday, July 10, 2017 1:02 PM  
**To:** Chantal Lavoie <clavoie@dartaero.com>  
**Subject:** RE: quote

Hi Chantal,

price and delivery on material.

7075-T6 SHEET OR BAR 1.250" X 12" X 12 FT \$ 86.42 Ft 2-3 weeks  
7075-T6 SHEET OR BAR 2" X 6" X 12 FT \$ 71.35 Ft 2-3 weeks  
7075-T6 SHEET OR BAR 2.750" X 2.750" X 12 FT Offer 3" x 2.750" \$ 52.42 Ft 2-3 weeks  
~~7075-T6 SHEET OR BAR 1.250" X 6" X 12 FT \$ 45.92 Ft 2-3 weeks~~  
7075-T6 SHEET OR BAR 1.750" X 4.500" X 12 FT \$ 48.90 Ft 2-3 weeks

7075-T6 SHEET OR BAR 3" X 4" X 12 FT (bar) \$ 94.85 Ft 2 weeks

Thanks

Marc Desbiens  
Inside sales representative